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(72) Inventor: **Chen, Chih-Chiang**
Taipei Hsien 221
(TW)

(74) Representative: **advotec.**
Patent- und Rechtsanwälte
Widenmayerstrasse 4
80538 München (DE)

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(71) Applicant: **Acer Incorporated**
Taipei Hsien 221 (TW)

(54) **Key-integrated LCD panel and method of integrating keys into LCD panel**

(57) A keys-integrated LCD panel includes a first conductor arranged on one face of a transistor substrate and a second conductor arranged on one face of a color filter substrate facing toward the transistor substrate. The second conductor meets the first conductor without contacting with the first conductor, and a key district is formed at the position at where the second conductor meets the

first conductor. When the key district is touched, the first and the second conductor electrically contact with each other and the signal level at one of the first and the second conductor will change. A controller is provided for detecting any change in the signal level at one of the first and the second conductor. When a change in the signal level is detected, the controller outputs a key signal corresponding to the touched key district.

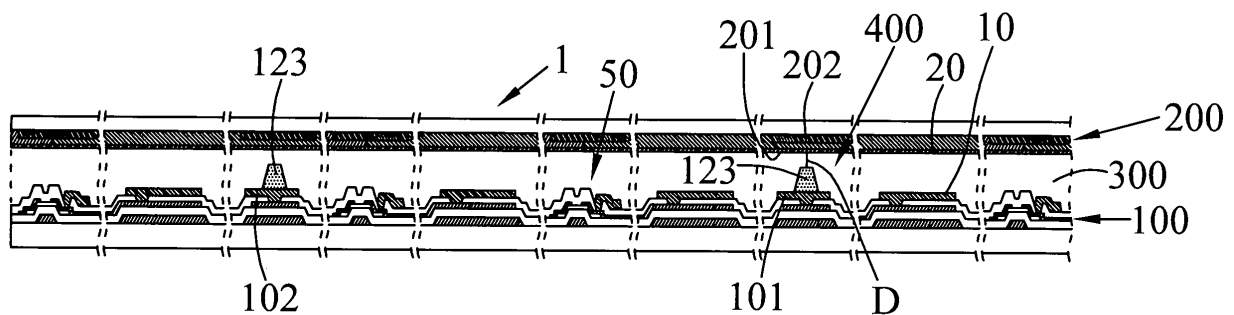


FIG.4



EUROPEAN SEARCH REPORT

Application Number
EP 09 00 7548

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2008/062139 A1 (HOTELLING STEVE P [US] ET AL) 13 March 2008 (2008-03-13) * abstract * * paragraph [0014] - paragraph [0016]; figures 1-107 *	1-15	INV. G06F3/041
X	US 2009/002331 A1 (KAMIYA KIYOSHI [JP] ET AL) 1 January 2009 (2009-01-01) * abstract * * paragraph [0017] - paragraph [0029]; figures 1-10 * * paragraph [0041] - paragraph [0104]; claims 1-20 *	1-15	
X	DE 198 28 978 A1 (GIESECKE & DEVRIENT GMBH [DE]) 30 December 1999 (1999-12-30) * the whole document *	1-15	
A	US 4 126 760 A (GORDON JOHN A) 21 November 1978 (1978-11-21) * the whole document *	1-15	
A	WO 2005/114369 A2 (APPLE COMPUTER [US]; HOTELLING STEVE [US]; STRICKON JOSHUA A [US]; HUP) 1 December 2005 (2005-12-01) * abstract * * page 3, line 1 - page 4, line 10 * * page 5, line 20 *	1-15	TECHNICAL FIELDS SEARCHED (IPC) G06F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 7 March 2011	Examiner Wierzejewski, Piotr
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 00 7548

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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07-03-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008062139 A1	13-03-2008	DE 112007003360 A1	18-02-2010
		US 2008062147 A1	13-03-2008
		US 2008062148 A1	13-03-2008
		US 2008062140 A1	13-03-2008
US 2009002331 A1	01-01-2009	JP 2009009116 A	15-01-2009
DE 19828978 A1	30-12-1999	NONE	
US 4126760 A	21-11-1978	GB 1589271 A	07-05-1981
WO 2005114369 A2	01-12-2005	AU 2005246219 A1	01-12-2005
		CA 2557940 A1	01-12-2005
		CN 1942853 A	04-04-2007
		EP 1745356 A2	24-01-2007
		JP 2007533044 T	15-11-2007
		KR 20070011450 A	24-01-2007
		KR 20110003385 A	11-01-2011
		US 2009096757 A1	16-04-2009
		US 2009066670 A1	12-03-2009
		US 2009096758 A1	16-04-2009
		US 2006097991 A1	11-05-2006